

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of the Claims

1. (Currently Amended) A switch comprising:
a plurality of ports;
a fabric manager coupled to the plurality of ports, the fabric manager configured to add information to the payload of a frame; and
a plurality of interconnected switching units coupled to the plurality of ports, each switching unit performing routing and switching functions, so that a frame may traverse multiple switching units in the switch,
wherein the fabric manager is configured to add information to the payload of [[the]]a frame traversing the plurality of switching units, the information including receive port identity, transmit port identity, switch identity and data about each of the traversed switching units and the interconnections between the traversed switching units when the frame traverses the multiple switching units.
2. (Previously Presented) The switch of claim 1, the information further including the speed of the receive port and the link cost of a link connected to the transmit port.
3. (Previously Presented) The switch of claim 1, the information further including transmit and receive rates of the receive port and the transmit port.
4. (Original) The switch of claim 3, wherein the transmit and receive rates are based on a first defined period.
5. (Previously Presented) The switch of claim 4, the information further including transmit and receive rates of the receive port and the transmit port based on a

second defined period, the second defined period being greater than the first defined period.

6. (Previously Presented) The switch of claim 5, the information further including the number of frames transmitted and received by the receive port and the transmit port.

7. (Previously Presented) The switch of claim 4, the information further including the number of frames transmitted and received by the receive port and the transmit port.

8. (Previously Presented) The switch of claim 1, wherein the fabric manager is configured to add the information to the payload of the frame when the frame is traveling from an original source to an original destination.

9. (Original) The switch of claim 8, wherein the fabric manager is configured to add the information to the frame when the frame is traveling from the original destination to the original source.

10. (Original) The switch of claim 1, wherein a node device is connected to one of the plurality of ports and wherein the fabric manager is configured to transmit the frame to the node device.

11. (Previously Presented) The switch of claim 1, wherein the fabric manager is configured to select the transmit port based on normal routing rules used for frames not having information added to the payload of the frame.

12. (Previously Presented) The switch of claim 11, wherein the fabric manager is configured to select the transmit port based on the source routing information used for frames having information added to the payload of the frame.

13. (Previously Presented) The switch of claim 12, wherein the fabric manager is configured to use normal routing rules used for frames not having information added to the payload of the frame if the source routing information does not indicate a device directly connected to the switch.

14. (Previously Presented) The switch of claim 11, wherein the switch is a Fibre Channel switch, wherein the frame is destination addressed to a well known address, and wherein the fabric manager is configured to determine a true destination address by retrieving data from the frame payload.

15. (Previously Presented) The switch of claim 1, wherein the fabric manager is configured to transmit the frame over all of a plurality of equal cost routes.

16. (Original) The switch of claim 1, wherein the switch is a Fibre Channel switch and the frame is an extended link services frame.

17. (Original) The switch of claim 1, wherein the fabric manager is configured to determine if the switch is the original destination of the frame, and if so, modify the frame to cause it to return to the original source.

18. (Previously Presented) The switch of claim 1, wherein the fabric manager is configured to determine if the switch was the original source of the frame, and if so, to capture the frame.

19. – 54. (Cancelled)

55. (Currently Amended) A method comprising:

adding information to the payload of a frame received by a switch, the information including receive port identity, transmit port identity, switch identity and data about each of the traversed switching units of a plurality of switching units within the switch and the interconnections between the traversed switching units when a frame

traverses multiple switching units, wherein each switching unit performs routing and switching functions.

56. (Previously Presented) The method of claim 55, the information further including the speed of the receive port and the link cost of a link connected to the transmit port.

57. (Previously Presented) The method of claim 55, the information further including transmit and receive rates of the receive port and the transmit port.

58. (Original) The method of claim 57, wherein the transmit and receive rates are based on a first defined period.

59. (Previously Presented) The method of claim 58, the information further including transmit and receive rates of the receive port and the transmit port based on a second defined period, the second defined period being greater than the first defined period.

60. (Previously Presented) The method of claim 59, the information further including the number of frames transmitted and received by the receive port and the transmit port.

61. (Previously Presented) The method of claim 58, the information further including the number of frames transmitted and received by the receive port and the transmit port.

62. (Previously Presented) The method of claim 55, wherein the information is added to the payload of the frame when the frame is traveling from an original source to an original destination.

63. (Original) The method of claim 62, wherein the information is added to the frame when the frame is traveling from the original destination to the original source.

64. (Cancelled)

65. (Previously Presented) The method of claim 55, wherein the transmit port is selected based on normal routing rules used for frames not having information added to the payload of the frame.

66. (Previously Presented) The method of claim 65, wherein the transmit port is selected based on the source routing information used for frames having information added to the payload of the frame.

67. (Previously Presented) The method of claim 66, wherein normal routing rules used for frames not having information added to the payload of the frame are used if the source routing information does not indicate a device directly connected to the transmit port.

68. (Previously Presented) The method of claim 65, wherein the frame is destination addressed to a Fibre Channel well known address, and wherein a true destination address is determined by retrieving data from the frame payload.

69. (Previously Presented) The method of claim 55, wherein the frame is transmitted over all of a plurality of equal cost routes.

70. (Previously Presented) The method of claim 55, wherein the frame is a Fibre Channel extended link services frame.

71. (Previously Presented) The method of claim 55, further comprising:
determining if the frame is at the original destination of the frame, and if so, modifying the frame to cause it to return to the original source.

72. (Previously Presented) The method of claim 55, further comprising:
determining if the frame is at the original source of the frame, and if so, to capturing the frame.

73. (Currently Amended) A switch, comprising:
a plurality of ports;
a plurality of switching units interconnecting said plurality of ports, each switching unit performing routing and switching functions; and
means for adding information to the payload of a frame received by ~~[[a]]~~the switch, the information including receive port identity, transmit port identity, switch identity and data about each of the traversed switching units of ~~[[a]]~~the plurality of switching units within the switch and the interconnections between the traversed switching units when ~~[[a]]~~the frame traverses multiple switching units.

74. (Previously Presented) The switch of claim 73, the information further including the speed of the receive port and the link cost of a link connected to the transmit port.

75. (Previously Presented) The switch of claim 73, the information further including transmit and receive rates of the receive port and the transmit port.

76. (Previously Presented) The switch of claim 75, wherein the transmit and receive rates are based on a first defined period.

77. (Previously Presented) The switch of claim 76, the information further including transmit and receive rates of the receive port and the transmit port based on a second defined period, the second defined period being greater than the first defined period.

78. (Previously Presented) The switch of claim 77, the information further including the number of frames transmitted and received by the receive port and the transmit port.

79. (Previously Presented) The switch of claim 76, the information further including the number of frames transmitted and received by the receive port and the transmit port.

80. (Previously Presented) The switch of claim 73, wherein the information is added to the payload of the frame when the frame is traveling from an original source to an original destination.

81. (Previously Presented) The switch of claim 80, wherein the information is added to the frame when the frame is traveling from the original destination to the original source.

82. (Currently Amended) The ~~method~~switch of claim 73, wherein the transmit port is selected based on normal routing rules used for frames not having information added to the payload of the frame.

83. (Previously Presented) The switch of claim 82, wherein the transmit port is selected based on the source routing information used for frames having information added to the payload of the frame.

84. (Previously Presented) The switch of claim 83, wherein normal routing rules used for frames not having information added to the payload of the frame are used if the source routing information does not indicate a device directly connected to the transmit port.

85. (Previously Presented) The switch of claim 82, wherein the frame is destination addressed to a Fibre Channel well known address, and wherein a true destination address is determined by retrieving data from the frame payload.

86. (Previously Presented) The switch of claim 73, wherein the frame is transmitted over all of a plurality of equal cost routes.

87. (Previously Presented) The switch of claim 73, wherein the frame is a Fibre Channel extended link services frame.

88. (Previously Presented) The switch of claim 73, further comprising:
means for determining if the frame is at the original destination of the frame, and if so, modifying the frame to cause it to return to the original source.

89. (Currently Amended) The switch of claim 73, further comprising:
means for determining if the frame is at the original source of the frame, and if so, [[to]] capturing the frame.

90. (Currently Amended) A non-transitory computer-readable storage medium comprising software that can be executed on a processor to cause the processor to:

add information to the payload of a frame received by a switch, the information including receive port identity, transmit port identity, switch identity and data about each of the traversed switching units of a plurality of switching units within the switch and the interconnections between the traversed switching units when a frame traverses multiple switching units, wherein each switching unit performs routing and switching functions.

91. (Previously Presented) The storage medium of claim 90, the information further including the speed of the receive port and the link cost of a link connected to the transmit port.

92. (Previously Presented) The storage medium of claim 90, the information further including transmit and receive rates of the receive port and the transmit port.

93. (Previously Presented) The storage medium of claim 92, wherein the transmit and receive rates are based on a first defined period.

94. (Previously Presented) The storage medium of claim 93, the information further including transmit and receive rates of the receive port and the transmit port based on a second defined period, the second defined period being greater than the first defined period.

95. (Previously Presented) The storage medium of claim 94, the information further including the number of frames transmitted and received by the receive port and the transmit port.

96. (Previously Presented) The storage medium of claim 93, the information further including the number of frames transmitted and received by the receive port and the transmit port.

97. (Previously Presented) The storage medium of claim 90, wherein the information is added to the payload of the frame when the frame is traveling from an original source to an original destination.

98. (Previously Presented) The storage medium of claim 97, wherein the information is added to the frame when the frame is traveling from the original destination to the original source.

99. (Previously Presented) The storage medium of claim 90, wherein the transmit port is selected based on normal routing rules used for frames not having information added to the payload of the frame.

100. (Previously Presented) The storage medium of claim 99, wherein the transmit port is selected based on the source routing information used for frames having information added to the payload of the frame.

101. (Previously Presented) The storage medium of claim 100, wherein normal routing rules used for frames not having information added to the payload of the frame are used if the source routing information does not indicate a device directly connected to the transmit port.

102. (Previously Presented) The storage medium of claim 99, wherein the frame is destination addressed to a Fibre Channel well known address, and wherein a true destination address is determined by retrieving data from the frame payload.

103. (Previously Presented) The storage medium of claim 90, wherein the frame is transmitted over all of a plurality of equal cost routes.

104. (Previously Presented) The storage medium of claim 90, wherein the frame is a Fibre Channel extended link services frame.

105. (Previously Presented) The storage medium of claim 90, wherein the software further causes the processor to determine if the frame is at the original destination of the frame, and if so, modifying the frame to cause it to return to the original source.

106. (Previously Presented) The storage medium of claim 90, wherein the software further causes the processor to determine if the frame is at the original source of the frame, and if so, to capturing the frame.